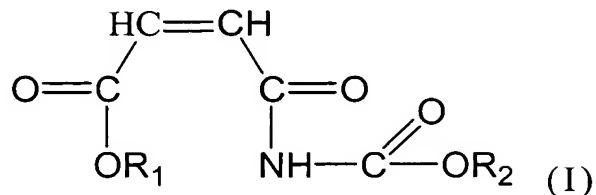


**WHAT IS CLAIMED IS:**

1. A bicarboxyl monomer of formula (I),



wherein  $R_1$  and  $R_2$  independently is H, alkali metal, or  $\text{NH}_4$ .

- 5            2. The bicarboxyl monomer as claimed in claim 1, wherein said alkali metal is sodium or potassium.
3. A process for preparing a bicarboxyl monomer, mainly comprising the following steps:
- 10            (a)            providing an organic solution containing maleic anhydride;
- (b)            adding ammonium carbamate to said organic solution;
- (c)            heating said organic solution to form a precipitate;
- (d)            filtrating said solution to obtain said precipitate;
- 15            (e)            dissolving said precipitate in water and adjusting the pH between 9 to 11; and
- (f)            removing the water in step (e) and drying the product to obtain bicarboxyl monomer.
- 20            4. The process as claimed in claim 3, wherein said organic solution in step (a) is a solution of acetone.
5. The process as claimed in claim 3, wherein the concentration of maleic anhydride in said organic solution in step (a) ranges from

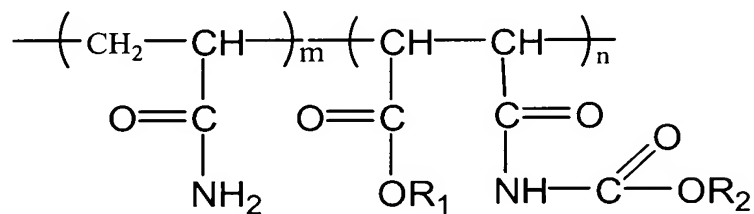
12 wt% to 25 wt%.

6. The process as claimed in claim 3, wherein the concentration of ammonium carbamate in said organic solution in step (b) ranges from 10 wt% to 20 wt%.

7. The process as claimed in claim 3, wherein said heating temperature in step (c) ranges from 40 to 60°C.

8. The process as claimed in claim 3, wherein the pH value of said solution in step (e) is adjusted by adding ammonium hydroxide of a concentration between 0.5 N to 1.5 N.

9. A bicarboxyl copolymer of formula (II):



(II)

wherein R<sub>1</sub> and R<sub>2</sub> is independently H, alkali metal, or NH<sub>4</sub>; m is an integral from 10 to 5000; and n is an integral from 10 to 3000.

10. The bicarboxyl copolymer as claimed in claim 9, wherein said alkali metal is sodium or potassium.

11. A process for preparing a bicarboxyl copolymer, mainly comprising the following steps:

- (a) providing an aqueous solution (1) containing ammonium 4-carboxylamino-4-oxo-2-butenate and acrylamide, and an aqueous solution (2)

containing potassium persulfate and sodium thiosulfate; wherein the molar ratio of ammonium 4-carboxylamino-4-oxo-2-butenate to acrylamide in said solution (1) ranges from 1:0.1 to 1:10, and the molar ratio of potassium persulfate to sodium thiosulfate in said solution (2) ranges from 3: 1 to 7:1;and

(b) adding solution (2) to solution (1) to form a mixture, and then sealing said mixture for 5 to 100 hours to form a copolymer of 4-carboxylamino-4-oxo-2-butenate / acrylamide (PCOB).

12.The process as claimed in claim 11, wherein the molar ratio of ammonium 4-carboxylamino-4-oxo-2-butenate to acrylamide in solution (1) ranges from 1:1 to 1:6.

13.The process as claimed in claim 11, wherein the molar ratio of potassium persulfate to sodium thiosulfate in solution (2) ranges from 4:1 to 6:1.

14.The process as claimed in claim 11, wherein said duration for sealing is 30 to 85 hours.

15.A copolymer dispersant composition, comprising a bicarboxyl copolymer of formula (II):

